

REMARKS

Claims 1-9 have been cancelled from the application and new claims 10-32 have been added to the application. Claims 10-32 have been added for clarification purposes in order to more fully define the scope of the present invention. No new matter has been added. As discussed in greater detail below, it is believed that claims 10-32 are allowable.

On page 2, paragraph 2 of the Office Action, the Examiner states that the Abstract and Summary Of The Invention do not reflect the issues presented in the claims. The Examiner requests the applicant to submit a new Background, new Summary and new Abstract describing the problem to be solved with the pending claims in the application.

Regarding the Background Of The Invention, it is submitted that the text describing the Background section of the present application complies with MPEP Section 608.01(c). Accordingly, it is believed that the Background Of The Invention of the present application is allowable.

With regard to the Abstract Of The Invention, it is submitted that the Abstract section of the present application complies with MPEP Section 608.01(b), which, according to the guidelines, requires that the content of the abstract be such as to enable the reader to ascertain quickly the character of the subject matter covered by the *technical disclosure* of the application, not merely the claims. Accordingly it is believed that the Abstract of the present application is allowable.

Regarding the Summary Of The Invention, applicant respectfully requests that the Examiner withdraw his objection to the Summary until the application and claims are in condition for allowance. This procedure is generally set forth in MPEP section 1302.01.

Claims 1-9 are rejected by the examiner under 35 USC section 103(a) as being unpatentable over Hart (U.S. Patent No. 5,423,002). It is noted that claims 1-9 have been cancelled from the application, and claims 10-32 added to the application. As explained in greater detail below, it is submitted that claims 10-32 are neither anticipated by nor obvious in view of Hart or any of the other cited prior art references.

More specifically, Hart teaches a technique for transparently extending network resources to remote LANs. As shown in FIGURE 1 of Hart, for example, a remote LAN or remote device 11 may be connected directly to the local LAN 10 via a communication link 20 and boundary router 12. As stated, for example, column 3, lines 22-33 of Hart, a small site LAN may install a routing adapter that is coupled to a communication link which provides point to point communication from the routing adapter to a boundary router 12. The boundary router provides the high level protocol suite services by way of the direct communication link and the routing adapter to the remote LAN. Thus, according to Hart, a user may access the remote device 11 via a local area network 10, which may be configured to provide a transparent physical interface to

the remote device. Moreover, in order for the user to control operational aspects of the remote device 11, the user must directly access the remote device 11, which may be accomplished via LAN 10. Additionally, as stated in column 3, lines 45-50 of Hart, the boundary router applies a network address of the remote routing interface/routing adapter as the source address to frames routed to the second network (i.e. remote network 11). According to this teaching, the remote network or remote device 11 is configured with a network level address (e.g. IP address) for which a higher level protocol service may be used by LAN 10 to allow a user to access the remote device 11.

In contrast, as described in the Detailed Description section of the present application, and as shown in FIGURE 1, for example, a virtual interface (e.g. 134) is provided at a local network device (e.g. 120) which allows a user or other device to control operational aspects of a remote network device (e.g. network extender 110) via communication link 123 without requiring that the user directly access the interface of the remote device. Thus, for example, when a user wishes to change operational aspects of the remote network device 110, the user is able to access the virtual interface (134) associated with the remote network device, which is located at the local network device 120. The user is then able to send command instructions to the virtual interface (134) for controlling the remote device 110. In accordance with at least one embodiment of the present invention, described, for example, in FIGURE 2A of the drawings, the local device encapsulates the command instructions according to a local area network (LEX) protocol and transmits the encapsulated instructions via a physical interface (e.g. 132) and a communication link (e.g. 123) to the remote network device. Upon receiving the encapsulated instructions, the remote device extracts and carries out the command instructions originally provided by the user.

One advantage of the technique of the present invention is that the remote network device 110 does not need to have an assigned network layer address (e.g. IP address) in order to allow the user to remotely control the network device 110. For example, as described in the specification, pages 11-12, the network extender 110 includes a MAC address which is used by router 120 for communication with the network extender. This is advantageous in that control of the remote network device may be achieved using fewer system resources in the remote network device as compared to conventional techniques.

Newly added claims 10-32 are each directed to a technique for controlling a first network device using a virtual interface associated with a second network device. Command instructions for controlling at least one operational aspect of the first network device are received at the virtual interface of the second network device. A command message is then generated using information from the command instructions, and is transmitted from the second network device to the first network device to thereby cause the first network device to carry out or realize the command instructions received at the virtual interface.

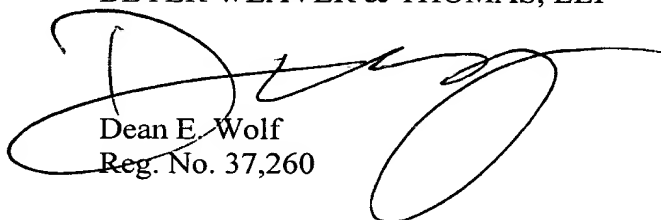
It is submitted that neither Hart nor any of the other cited prior art references teach or suggest the claimed features of the present invention. For example, Hart does not teach or suggest using a virtual interface for receiving command instructions at a first network device which are then encapsulated and sent to the remote network device for execution. Rather, as explained above, Hart teaches a technique for transparently extending network resources to remote LANs. Thus, a user wishing to control a remote device in the system of Hart is able to directly access the remote device through a local LAN. According to the teaching of Hart, the remote device appears to the user to be part of the local LAN.

In contrast, the present invention teaches a technique for providing a virtual interface at a local device which allows the user to issue command instructions to a remote device. The user does not communicate directly with the remote device as in Hart, but rather communicates instructions to the virtual interface at the local device which then forwards the instructions to the remote device.

From the above discussion, it is clear that the network taught in Hart does not function in substantially the same way to produce substantially the same result as that taught by the technique of the present invention. Accordingly, it is submitted that claims 10-32 are neither anticipated by nor obvious in view of the prior art references, and are therefor believed to be allowable.

Claims 10-32 are presently pending in the application. Reconsideration of the rejected claims is respectfully requested, and an earlier indication of the allowability of claims 10-32 is earnestly solicited. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,
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